

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/JP2004/008697

International filing date (day/month/year)  
15.06.2004

Priority date (day/month/year)  
15.07.2003

International Patent Classification (IPC) or both national classification and IPC  
B60K6/04, B60L11/18

Applicant  
TOYOTA JIDOSHA KABUSHIKI KAISHA

#### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

#### 2 FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

#### 3. For further details, see notes to Form PCT/ISA/220.

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10/563137

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2004/008697

**IAP20 Rec'd PCT/PTO 03 JAN 2006**

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2004/008697

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**Box No. II Priority**

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1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	10
	No: Claims	1-9,11-19
Inventive step (IS)	Yes: Claims	
	No: Claims	1-19
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations

**see separate sheet**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)

PCT/JP2004/008697

Re Item V.

1. The following documents are referred to in this communication:

- D1 : US 6 549 840 B1 (KAWABATA TAKUJI ET AL) 15 April 2003 (2003-04-15)  
D2 : US 6 381 522 B1 (SEKOZAWA TERUJI ET AL) 30 April 2002 (2002-04-30)  
D3 : US 2003/037977 A1 (AMANUMA HIROKATSU ET AL) 27 February 2003  
(2003-02-27)  
D4 : EP 0 909 675 A (TOYOTA MOTOR CO LTD) 21 April 1999 (1999-04-21)  
D5: SPOONER E ET AL: "TORUS": A SLOTLESS, TOROIDAL-STATOR,  
PERMANENT-MAGNET GENERATOR" IEE PROCEEDINGS B.  
ELECTRICAL POWER APPLICATIONS, INSTITUTION OF ELECTRICAL  
ENGINEERS. STEVENAGE, GB, vol. 139, no. 6, 1 November 1992 (1992-  
11-01), pages 497-506, XP000343941

2. Novelty, Art. 33(1) and (2) PCT

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.  
Document D1 discloses (the references in parenthesis applying to this document):

A power output apparatus that outputs power to a drive shaft, said power output apparatus comprising:

an internal Combustion engine (column 23, line 37, "engine 14", figure 1) ;

an electric power-mechanical power input-output unit that is linked with an output shaft of said internal combustion engine and with said drive shaft, and maintains or changes a driving state of said internal combustion engine and outputs at least part of power from said internal combustion engine to said drive shaft through inputs and outputs of electric power and mechanical power (column 23, line 39, "planetary gear 18", figure 1);

a motor that is capable of inputting and outputting power from and to said drive shaft (column 23, line 38, "motor/generator 16", figure 1);

an accumulator that is capable of supplying and receiving electric power to and from said electric power-mechanical power input-output unit and said motor (column 26, line 49, "energy storing device 112"); and

-a controller comprising: an input-output restriction setting module that sets an input restriction and an output restriction of said accumulator (column 28, line 61 to column 29, line 4, "upper limits"); a drivable range setting module that sets a drivable range of said electric power-mechanical power input-output unit based on the settings of input and output restrictions (column 43, line 47 to column 44, line 29); a power demand setting module that sets a power demand required for said drive shaft in response to an operator's manipulation (column 26, lines 6 to 31, "accelerator pedal 122"); and a driving control module that controls said internal combustion engine, said electric power-mechanical power input-output unit, and said motor to drive said electric power-mechanical power input-output unit in the setting of drivable range and to output a power corresponding to the setting of power demand to said drive shaft (column 25, line 62 to column 26, line 44, "engine control device 100", "transmission control device 102", hybrid control device 104").

Thus, all features of claim 1 are already known from the disclosure of D1. Therefore, the subject matter of claim 1 is not new in the sense of Art. 33(1) and (2) PCT.

- 2.2 Although claims 2 and 11 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and/or in respect of the terminology used for the features of that subject-matter.

In more detail, the subject matter of claim 11 differs from that of claim 1 only in the additional feature "automobile" which comprises all the features of claim 1.

However, an automobile with the features according to claim 1 is also known from the disclosure of D1 (column 1, lines 9 and 10).

Thus, the above said with respect to the subject matter of claim 1 applies mutatis mutandis to the subject matter of claim 11.

Therefore, all features of claim 11 are known from the disclosure of D1.  
Consequently, the subject matter of claim 11 is not new in the sense of Art. 33(1) and (2) PCT.

- 2.3 The subject matter of claim 18 relates to a purposive use of the apparatus according to claim 1. Thus, the above said with respect to the subject matter of claim 1 applies mutatis mutandis to the subject matter of claim 18.

Therefore, all features of claim 11 are known from the disclosure of D1.  
Consequently, the subject matter of claim 18 is not new in the sense of Art. 33(1) and (2) PCT.

- 2.4 Dependent claims 2-10, 12-17, 19 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).